



NRC Review of North Dakota's Radiation Control Program

A review of the North Dakota Department of Health's Radiation Control Program was conducted April 13 through 16, 1999, by a review team comprised of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the South Carolina Radiation Control Program.

The NRC's Integrated Materials Performance Evaluation Program (IMPEP) was implemented in 1995 to evaluate NRC Regional material programs and Agreement State radiation control programs using defined evaluation criteria to ensure consistency in the nation's radioactive materials safety programs.

The performance indicators reviewed during the IMPEP review were:

- Status of Materials Inspection Program
- Technical Quality of Inspections
- Technical Staffing and Training
- Technical Quality of Licensing Actions
- Response to Incidents and Allegations
- Adequacy and Compatibility of State Regulations

Reviews are conducted jointly by the offices of Nuclear Material Safety and Safeguards and State Programs staff

with an Agreement State and a Regional representative usually on the team. Agreement States are reviewed every two to four years. The timeline may be adjusted depending upon performance.

A Management Review Board (MRB) makes the overall assessment of each NRC Region or Agreement State program on the basis of the proposed final report and recommendations prepared by the team that conducted the review.

The findings for an Agreement State program are limited to the following selections. The program may be found:

1. Adequate to protect the public health and safety and is compatible/not compatible with NRC.
2. Adequate, but needing improvement and is compatible/not compatible with NRC.
3. Inadequate to protect public health and safety and is compatible/not compatible with NRC.

The MRB considers the results of the IMPEP and any other pertinent information when making a determination of adequacy (adequate to protect public health and safety) and a determination of compatibility (similar or identical to NRC requirements).

On June 30, 1999, the MRB met to consider the proposed final IMPEP report on the North Dakota Radiation Control Program. The MRB found the North Dakota program adequate to protect public health and safety and compatible with NRC's program.

Based on the results of the current IMPEP review, a follow-up IMPEP review focusing on the Status of Materials Inspection Program indicator will be completed in the spring of 2000; and the next full review of the program will be conducted in approximately four years.

The complete report submitted to the MRB by the IMPEP review team is available at the NRC's Office of Agreement States homepage:

<http://www.hsrdo.nrl.gov/nrc/reviews.htm#northdakota>

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Are You Ready for 2000?

As the year 2000 (Y2K) approaches, the Radiation Control Program is updating computer systems and applications for use into the next millennium. On the federal level, the Nuclear Regulatory Commission (NRC) has implemented a readiness program that will accurately process date/time data between the years 1999 and 2000.

The Y2K problem applies to computers that use a two-digit field to represent the year (i.e. 98, 99, and 00). Misreading the year may cause system failures and/or produce faulty data. Serious problems can occur if a facility does not ensure that computer systems and peripherals are Y2K compliant. One example would be a computer software program used to calculate therapeutic dose or account for radioactive decay that may recognize "00" as being the year 1900 instead of the year 2000.

The North Dakota Department of Health advises all radioactive material licensees and radiation-producing machine registrants to ensure that computer systems and software related to radiation safety are Y2K compliant.

To consider a system/process Y2K compliant, it must:

- Handle date information before, during and after midnight on Dec. 31, 1999.
- Function accurately/without interruption before, during and after midnight on Dec. 31, 1999.
- Respond to two-digit year data input correctly.
- Correctly process any date with a year specified as "99" or "00."
- Recognize year 2000 as a leap year.

*Being Y2K compliant includes,
but is not limited to, the criteria listed above.*

The following websites may be helpful as we all make the transition to the new millennium:

<http://www.state.nd.us/isd/y2k/>

<http://unix.cc.wmich.edu/rea/Y2K/FAQ.html>

<http://www.y2k.gov>

<http://www.nrc.gov/NRC/NEWS/year2000.html>

Radioactive News is a publication of:



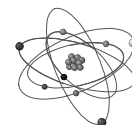
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Let Us Know if You're on the Web

As you know, the Radiation Control Program has its own homepage and we encourage all of you to familiarize yourself with what's available. In turn, we are interested in learning which of our licensees have access to the Internet and email services. If you have an email account, please send a short message to Justin Griffin at jgriffin@state.nd.us and let him know that you are available "on-line." Please include in your message who the contact person at this email address is and how often email is checked for new messages. We are interested in making it as easy as possible for you, our licensees, to ask us questions and for us to respond as efficiently as possible.

In addition, if your company has created its own homepage, please let us know. We're always interested in learning more about our licensees. The more we know, the more we understand how radioactive materials are used by your company.



Industrial Radiography Exam Statistics for 1999

Through an agreement with the Conference of Radiation Control Program Directors (CRCPD) and in association with the Texas Bureau of Radiation Control, the North Dakota Department of Health is authorized to administer a Nuclear Regulatory Commission (NRC) approved industrial radiographer safety examination in North Dakota.

A total of 35 participants have taken the examination in 1999. Of those, 32 have successfully passed the examination. Therefore, the overall passing rate for the safety examination is 91 percent.

Twenty-one participants have been certified to perform industrial radiography in North Dakota using radioactive materials only. The average score of these participants was 81 percent.

Eleven participants have been certified to perform industrial radiography in North Dakota using both x-rays and radioactive materials. The average score of these participants was also 81 percent.

Regulatory Compliance

In our first newsletter, published in February 1999, we provided a list of violations commonly cited following North Dakota Department of Health inspections of licensed facilities. One of the most commonly cited violations found during routine radiation safety inspections is related to dose limits for individual members of the public.

As stated in Section 33-10-04.1-07 of the North Dakota Radiological Health Rules, the total effective dose equivalent to individual members of the public from licensed operations cannot exceed 100 mrem in a year. In addition, the dose rate in any unrestricted area cannot exceed 2 mrem in any one hour. A record of compliance must be kept for review by the department. This violation is commonly cited as:

A record of compliance with public dose limits was not available during the inspection. The licensee must maintain records that demonstrate compliance by measurement or calculation of the highest possible dose to any individual member of the public or any non-radiation worker. This dose must be less than the established annual dose limit of 100 millirem. [North Dakota Radiological Health Rules 33-10-04.1-15 Subsection 8 and Section 33-10-04.1-07]

If such a document is not available for your facility under current operations, we suggest you create one before your next inspection. The document should include a drawing and/or a description of areas near radioactive material which are accessible to the public and the measured or calculated radiation levels present in these areas. The radiation levels should be used along with time estimates to show that no member of the public will receive greater than 100 mrem over the course of an entire year. Area monitoring devices such as film badges or TLDs may also be used to show compliance with this limit.

A list of common violations is available at <http://www.health.state.nd.us/ndhd/envIRON/ee/rad/violate.htm>, or by calling the Radiation Control Program at 701.328.5188.

Transportation of Radioactive Materials

All companies or individuals that transport radioactive material are subject to applicable Department of Transportation (DOT) rules. Portions of all routine radiation safety inspections include a review of licensee operations for compliance with DOT rules (49CFR - Transportation). To help you maintain compliance with applicable DOT rules, the Department of Health has assembled the following list of frequently asked questions and the corresponding answers.

Q: Are shippers and carriers required to keep copies of shipping papers for each hazardous material shipment?

A: Yes. The Hazardous Materials Transportation Authorization Act of 1994 amended the federal hazardous materials transportation law to require shippers and carriers to retain shipping papers for a period of one year.

Q: Are slogans or signs such as "Drive Safely," which are often displayed on placards and in placard holders, prohibited on a transport vehicle?

A: Yes. Any slogan, sign or other device that by its color, design, shape or content could be confused with any placard is prohibited. The restrictions under § 172.502(a)(2) do not apply until Oct. 1, 2001, to a safety sign or slogan which was permanently marked on a transport vehicle, bulk packaging or freight container before Aug. 21, 1997. Remember, the key question to ask yourself is, "Could the sign be confused or interpreted as a placard?"

Q: What training requirements does the DOT have for hazmat employees and vehicle drivers?

A: The requirements for hazmat employee training is described in § 172.704. This training includes general awareness/familiarization training, function-specific training and specific safety training. The required driver training is described in § 177.816. This training is required for all people who transport radioactive material.

Q: May a hazmat employer/employee train and test themselves (e.g., owner-operator)?

A: Yes, provided that all training requirements of § 172.704 are met.

Q: Would DOT's overview videotape satisfy the general awareness/familiarization training requirement? If so, how does one obtain the videotape?

A: Yes. This public domain videotape may be borrowed and copied by contacting:

U.S. Department of Transportation, DHM-51
Office of HazMat Initiatives and Training
400 7th Street SW
Washington, DC 20590-0001

Phone: 202.366.2301
Fax: 202.366.7342

Q: What should training records contain?

- A:
1. Hazmat employee's name,
 2. Completion date of training,
 3. Training materials (copy, description, or location),
 4. Name and address of hazmat employee trainer, and
 5. Certification that the hazmat employee has been trained and tested.

Q: Where is the best place to store shipping papers in the transport vehicle?

A: The requirements for shipping paper accessibility during ground transport can be found in § 177.817(e). The shipping papers should be clearly marked and within the driver's immediate reach while he/she is at the vehicle's controls. When the driver is not at the controls, the shipping papers shall be (a) in a holder mounted to the inside of the driver's side door or (b) on the driver's seat in the vehicle.

A document entitled "Radioactive Material Regulations Overview" created by the DOT is available for review from the Radiation Control Program Homepage at <http://www.health.state.nd.us/ndhd/envIRON/ee/rad/ramreview.pdf> .

Additional information is available from DOT's hazmat safety page at <http://hazmat.dot.gov> .



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ADDRESS CORRECTION REQUESTED